

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

March 28, 1848.—Wm. Yarrell, Esq., Vice-President, in the Chair.

The following papers were communicated to the Meeting:—

1. DESCRIPTION OF A NEW SPECIES OF BUTTERFLY, OF THE GENUS AGRIAS. BY W. C. HEWITSON, M.E.S. ETC.

Genus AGRIAS, Boisd. MSS.

Head rather broad, clothed with hair; eyes nearly round or slightly oval, prominent; maxillæ rather longer than the thorax; labial palpi rather widely separated, ascending, thickly clothed with scales, which in front are long; basal joint curved, very short, second more than twice the length of the first; third short, pointed. Antennæ elongate, about three-fourths the length of the body, gradually thickening from the base to the apex.

Thorax large, elongate-ovate, truncate posteriorly, hairy. Anterior wings subtriangular, the anterior margin rounded, about one-half longer than the outer, which is nearly straight or slightly sinuate; the inner margin rather longer than the outer, straight. Costal nervure stout, extending beyond the middle of the costa; subcostal nervure throwing off its first nervule about the middle, the second a short distance before the end of the cell, the third at some distance beyond the cell, the fourth rather more remote from the third than that is from the fourth. Third subcostal nervule terminating at the apex; fourth running close to the third until near the apex, then bent downwards and reaching the outer margin about half-way between the apex and the termination of the fifth subcostal nervule; upper disco-cellular nervule very short, middle above twice the length of the upper, lower nearly twice the length of the two other combined; third median nervule considerably curved. Posterior wings obovate; the fold for the reception of the body ample, anterior margin rounded, outer slightly dentate, sinuate; precostal nervure simple; cell closed by a slight disco-cellular nervule.

Anterior feet of the female small, the femur and tibia about of equal length, the tarsus short, four-jointed, the basal joint longer than the rest combined, which are all short, transverse, and nearly equal. Middle and posterior feet stout, rather short; the tibiæ spiny within, the spurs very short; the tarsi spiny at the sides, the first joint spiny below also, equal in length to the rest combined; claws small, curved; pulvillus large.

Abdomen short, tapering.

AGRIAS ÆDON. *Ag. alis anticis suprâ latè chermesinis, apice margineque interno nigro, posticis suprâ nigris plagâ magnâ, cyaned, subtùs fuscescentibus, ocellis septem submarginalibus nigris, albo pupillatis.*

Exp. alar. 3 unc. 9 lin., vel 95 millim.

Hab. Nueva Granada.

Above, anterior wings rich crimson, the costal nervure and the inner margin fuscous black, the apex broadly and triangularly black, the black colour commencing on the costa opposite the end of the cell, becoming narrower towards the outer angle, where it unites with the fuscous black of the inner margin. Posterior wings black, marked with a large blue discoidal patch, extending nearly to the anal angle. Below, anterior wings with the part corresponding to the crimson of the upper surface much paler than above, the cell with two round black spots; the black of the apex and inner margin replaced by pale fuscous; the disco-cellular nervules marked with a fuscous black dash, and the apex crossed by two oblique bands of the same colour. Posterior wings pale fuscous, with two rounded fuscous spots in the cell; several scattered lituræ of the same colour before the middle of the wing, then two transverse bands also fuscous, followed by a series of seven black spots pupilled with white, the last bipupillate, the second spot the largest: between these spots and the margin a third fuscous band.

Head, thorax and abdomen black.

This beautiful butterfly is I believe unique in my own collection. It was taken by my friend Mr. Empson many years ago in South America, and was one of a very few things—all at that time very rare—which were saved from the shipwreck of a large collection.

Mr. E. Doubleday, whose experience gives him great facility, has kindly supplied me with the generic characters.

2. DESCRIPTION OF *ECHINOCERUS CIBARIUS*, A NEW SPECIES AND SUBGENUS OF CRUSTACEA. BY ADAM WHITE, F.L.S. ETC.

Amongst the Decapod Crustacea there are several genera of doubtful situation which belong to neither of the great divisions *Brachyura* and *Macroura*. Professor Milne-Edwards first brought them together as a section, under the name of *Anomoura*; but, as he remarks, they do not form a very natural group, the principal advantage derived from its formation being the opportunity which it gives the systematist to withdraw all the aberrant species from the two very natural sections specified above. Not a year passes but new species are added to this group, and occasionally a new form is found; in course of time these discoveries will serve to link genera which seem at present to be distant from each other, if at all related. The species described below is close to the genus *Lithodes*, some of the species of which have considerable resemblance to it. The generic name describes the peculiarity of the spined appendage to the outer antennæ, while the specific name is given in allusion to its excellence as an article of food.

In one of the two specimens in the British Museum, the legs, carapace and abdomen are covered with numerous barnacles, and on taking off the old carapace, which had commenced to split, the still coriaceous envelope, which would have formed the new carapace, may be found beneath it. On this are very plainly indicated the crowded warts, the scattered knobs, and lateral projecting spines, which are so prominent on the outer surface of the old carapace.

The different regions of the carapace are also clearly distinguished : the body of this new carapace is coriaceous ; the warts are more calcareous, and consist for the most part of small irregularly-shaped plates, arranged circularly round a small group of calcareous scales. These groups are of different sizes, from that of the head of a small pin to the space occupied by the top of a tolerably large nail. On a small portion of the carapace, on each side of the middle knob, and in two lines directed towards the front, there are distinct portions of calcareous matter already formed, while on the abdominal plates there are still more extensive calcareous portions formed in the corium ; the various groups of plates are distinctly visible, most of the scales are perforated, and through the holes in many cases a short hair or bristle protrudes. This new skin is only visible on the carapace and on the abdominal plates.

ECHINOCERUS (LITHODES) CIBARIUS.

Carapace considerably wider than long, subtriangular, very irregular above ; the front sinuated, with a large projecting pointed beak springing from the middle, and armed above with three or four spines arising from one knob ; the sinus on each side has three spines, the outer one very large and projecting ; edge of the carapace more or less spined all round, the spines on the latero-anterior ridges being sharp, those on the latero-posterior and posterior edges being blunt ; the latero-anterior and latero-posterior edges separated by a deep notch ; general surface of carapace closely covered with tubercles, which are perforated, and furnished with bristles springing from the holes ; on the stomachal region there is a high conical projection, the sides of which are comparatively smooth ; near the base of this on each side is a smooth somewhat oval wart, with an impressed line behind it ; on each branchial region a high conical projection, and another behind the middle of a straight line drawn between the branchial tubercles ; the posterior edge of the carapace with two rather large tubercles separated by a slight sinus.

Chelæ with the end of the fingers hollowed out somewhat like a spoon, the edges granulated, the hands with numerous large bristly pointed tubercles on the outside, three of these being on the upper edge ; the wrist with a large triangular expansion on the inside, which is spined and tubercled above ; second, third and fourth pairs of legs nearly as long as the first pair, and very similar in appearance, but not so thick ; the third joint from the tarsus flat on the sides ; the upper surface of the legs with large conical bristly tubercles or spines ; the spines on the tibial joint arranged in three longitudinal lines ; the tarsus spined, particularly on the lower edge ; fifth pair of legs quite concealed within the branchial cavities.

Outer antennæ with a large appendage at the base ; this appendage is smooth below, and has four longitudinal rows of spines on its upper portion, the lateral rows having the longest spines.

Inner antennæ situated beneath and to the outside of the eyes ; the first joint very thick, particularly at the base, subcylindrical ; second and third joints cylindrical, nearly equal in length, thickest at the tips.

Eyes close together, placed under the frontal spine; the peduncle is much shorter than, and not nearly so thick as, the basal joint of inner antennæ; the upper side covered with small spines.

Outer jaw-feet resemble those of *Lithodes*, especially in *L. brevipes*.

Abdomen very wide, rounded at the base, triangular at the end, formed of many plates of different sizes, which are close together; the basal segment is crescent-shaped, and within its sinus are included the other plates, which are arranged in four longitudinal series; the outer series narrow, the other three wide; the plates of different sizes and shapes, with two supplemental plates, one on each side of the central row, and at its base; the plates with rough and bristly tubercles; the first joint of abdomen with two round depressions, the base of each being coriaceous-like, and furnished with only a few small scattered calcareous tubercles; the middle of the hind-edge with four tubercles placed in pairs.

Hab. North America, mouth of the Columbia River; Sir George Simpson. In Mus. Brit.

3. DESCRIPTIONS OF NEW SPECIES OF TURBO, CHIEFLY FROM THE COLLECTION OF HUGH CUMING, ESQ., F.L.S. BY LOVELL REEVE, F.L.S. ETC.

TURBO NATALENSIS. *Turb. testâ vix imperforatâ, orbiculari, depressiusculâ, anfractibus spiraliter sulcatis, sulcis regulariter concavis latiusculis; olivaceo-viridescente, rufo radiatim maculatâ et punctatâ, intus argenteâ; operculo testaceo, cristato.*

Hab. Port Natal; Wahlberg.

The operculum of this beautiful species is a tufted mass, like that of the *T. sarmaticus*.

TURBO SAXOSUS. *Turb. testâ imperforatâ, ovatâ, spiræ suturis subprofundè impressis; anfractibus supernè concavo-declivibus, medio angulatis, transversim obscure liratis, tuberculis juxta suturas coronatis, infrâ nunc muticis, nunc tuberculis bi-tri-seriatim armatis, laminis subtilibus, longitudinaliter obliquis, peculiariter exsculptis; viridi albimaculatâ, intus argenteâ; operculo testaceo, crasso.*

Hab. West Columbia; Cuming.

Having observed this species in a private collection, under the name *saxosus*, in manuscript, I adopt it, though not a very appropriate one, lest it may have been published and escaped my observation. The rows of tubercles are extremely variable, being even more prominently developed in specimens of smaller growth than is here represented.

TURBO LAMINIFERUS. *Turb. testâ umbilicatâ, ovatâ, spiræ suturis canaliculatis; anfractibus subtubulosis, spiraliter costatis, costis distantibus, et, cum interstitiis, pulcherrimè concentricè laminatis, aperturâ rotundâ; viridi, nigro longitudinaliter undatâ, intus argenteâ.*

Hab. Mouth of the Victoria river, New Holland.

A very beautifully sculptured species, allied to the *T. Ticaonicus*, but perfectly distinguished from it, in being of uniformly smaller size,

more distinctly and remotely ribbed, and in being concentrically frilled throughout with a close succession of delicate laminae.

TURBO MURREUS. *Turb. testá minutá, suborbiculari, vix umbilicatá, lævigatá, politá, albá, roseo nitidè maculatá.*

Hab. — ?

A minute, delicately coloured, porcelain shell.

TURBO CORALLINUS. *Turb. testá parvâ, suborbiculari-ovatâ, imperforatâ, conspicuè spiraliter sulcatâ; roseo-purpureâ, intùs margaritacèd.*

Hab. — ?

Another interesting small species, of a dull livid rose-purple hue, strongly spirally grooved.

TURBO TROCHOIDES. *Turb. testá subpyramidali-ovatâ, perforatâ; anfractibus spiraliter sulcatis, supernè concavis, deinde obsoletè nodosis; luteo-albicante, olivaceo radiatim maculatâ, lineolis minutissimis aurantio-fuscis, obliquè reticulatis.*

Hab. — ?

A species of peculiar sculpture and marking, partaking very much of the generic character of *Trochus*.

TURBO PUSTULATUS. *Turb. testá ovatâ, subventricosâ, imperforatâ, nodis grandibus papillosis undique notatâ, aperturæ fauce argentèd; albidd, olivaceo-fusco luteoque maculatâ.*

Hab. — ?

An interesting species covered with swollen nodules; collected by Sir Edward Belcher during the voyage of the 'Sulphur.'

TURBO TURCICUS. *Turb. testá subpyramidali-ovatâ, imperforatâ, spiræ suturis excavatis, anfractibus spiraliter squamato-liratis, supernè declivibus, acutè angulatis, ad angulum erecto-squamatis, aperturâ parvâ, lutescente, coccineo rufo pulcherrimè radiatâ.*

Hab. Philippine Islands; Cuming.

A prettily painted species encircled by a diadem of erect scales.

TURBO PYROPUS. *Turb. testá subdepresso-ovatâ, imperforatâ, spiræ suturis simplicibus, anfractibus lævibus, striisve spiraliter cingulatis; albidd, striis vividè rubris, intùs argentèd.*

Hab. — ?

Of a deep blood-red colour, with the margins of the aperture united beyond the columella.

TURBO GEMMATUS. *Turb. testá subdepresso-ovatâ, imperforatâ, spiræ suturis subprofundè canaliculatis, anfractibus nodulis parvis undique gemmatis; corallo-rufescente, intùs argentèd.*

Hab. — ?

Very similar in form to the preceding species, and partaking in some measure of the colour; the spire differs in having the sutures deeply channeled, and the entire surface in being beaded with small papillose nodules. In the former species the margins of the aperture are entire, and it is the striæ that are coloured upon a white ground.

TURBO LUGUBRIS. *Turb. testá suborbiculari-ovatâ, spirâ depressâ,*

anfractibus supernè declivibus, deinde nodulis papillosis cingulatis, columellâ concavâ; albidd, epidermide crassâ nigricante indutâ, columellâ et aperturâ argenteis.

Hab. — ?

Another species collected by Captain Belcher in the 'Sulphur,' not hitherto described.

TURBO NIVOSUS. *Turb. testâ oblongo-turbinatâ, imperforatâ, spirâ subæsertâ, anfractibus spiraliter liratis, liris obtusis, irregularibus, duabus prominentibus subsquamosis; vividè virescente, fusco hic illic maculatâ, liris prominentibus et inferioribus fusco niveoque articulatis, intûs argenteâ.*

Hab. Philippine Islands; Cuming.

A prettily painted species, apparently not described before.

TURBO TUMIDULUS. *Turb. testâ ovatâ, imperforatâ, spirâ subacuminatâ, anfractu ultimo amplo, tumidiusculo; anfractibus undique spiraliter liratis, liris angustis, confertis, valdè irregularibus, obliquè serratis; lutescente, intensè castaneo-nebulatâ.*

Hab. — ?

This species merges into the *T. spinosus*, but is very remotely connected with it.

TURBO CIRCULARIS. *Turb. testâ suborbiculari, imperforatâ, spirâ breviusculâ, anfractibus supernè depressis, liris obtusè nodiferis, alternatim majoribus, cingulatis; rosaceo-fusco alhoque marmoratâ, columellâ plano-concavâ, albâ, intûs margaritacèâ.*

Hab. — ?

Very nearly allied in form and general aspect to the *T. Natalensis*, but readily distinguished on comparison.

TURBO PORCATUS. *Turb. testâ orbiculari, spirâ depressiusculâ, suturis excavatis, subtûs concavâ, profundè umbilicatâ, anfractibus fortiter spiraliter costatis, costis rotundatis, lirâ minutâ interveniente; viridi, rufo-olivaceo nitidè marmoratâ, intûs argenteâ.*

Hab. Point Swan, North Australia; Dring.

Allied in form to the *T. versicolor* and *porphyrites*, from both of which species it is sufficiently distinguished by its strongly-ribbed growth.

TURBO ARTICULATUS. *Turb. testâ ovatâ, vix umbilicatâ, spirâ acuminatâ, anfractibus subtubulosis, spiraliter obtusè costatis, costis irregularibus longitudinaliter creberrimè serrato-striatis; viridi purpureo-nigricante marmoratâ et variegatâ, intûs argenteâ.*

Hab. — ?

Allied to the *T. radiatus* in form, but peculiar in its articulated style of painting.

TURBO JAPONICUS. *Turb. testâ ovatâ, imperforatâ, tenuiculâ, subinflatâ, anfractibus lævibus, spiraliter costatis, costis nunc prominentibus, regularibus, nunc planiusculis, valdè irregularibus; spaldiceo-luteâ, rufo variè tinctâ et maculatâ, intûs argenteâ.*

Hab. Japan.

Like most shells from the Japanese islands, this is of very peculiar

character, and very different from any of the tropical species of the genus.

TURBO MILITARIS. *Turb. testâ ovatâ, imperforatâ, tenuiculâ, subventricosâ, anfractibus lævibus, supernè declivibus; rufescente albidâ, maculis lineisque rufis nitidè pictâ; columellæ margine livido-cinereo, intùs argenteo.*

Hab. Isle of Annaa (on the reefs); Cuming.

An interesting species of rather light growth, exhibiting a very distinct and characteristic style of painting.

TURBO HISTRIO. *Turb. testâ subglobosâ, tumidâ, imperforatâ, spiræ suturis excavato-canaliculatis, spiraliter liratis, liris subtilissimè laminiferis, squamatis, squamis fortibus, erectis; nived, aurantio-ferrugineo latè radiatâ, intùs argenteâ.*

Hab. —?

A shell of ventricose growth, strongly scaled, whilst the entire surface is very minutely laminated.

TURBO FLUCTUATUS. *Turb. testâ transversè ovatâ, crassiusculâ, subventricosâ, imperforatâ; anfractibus lævibus, supernè rudè angulatis, ad angulum obsoletè nodosis, infrâ liris plano-obtusis, hic illic ferè evanidis cingulatis; columellâ concavâ; olivaced, lineis niveis viridi-umbratis, acutè undatis conspicuè longitudinaliter pictâ, intùs argenteâ; operculo testaceo, spiraliter sulcato, medio subtilissimè granuloso, marginem versus multiserrato.*

Hab. Punta, St. Elena, West Columbia; Cuming.

An extremely interesting species, which, though of rare occurrence, has long been known to me by the above name: from whom it received that appellation, which is very characteristic, I cannot, however, learn. It is a shell of solid growth, somewhat rudely noded, and obscurely flatly ridged. The ground-colour is that of a livid olive, very conspicuously marked with numerous zigzag lightning-like streaks of bright body-white, shaded with dark green.

The operculum is remarkable: testaceous and strongly spirally grooved, the innermost groove is broadly excavated, and the central mass is solid and minutely granulated, whilst the portion without the broad groove is arranged in numerous concentric, finely-serrated laminae.

April 11.—William Yarrell, Esq., Vice-President, in the Chair.

The following paper was read to the meeting:—

SUPPLEMENTARY NOTE ON THE GREAT CHIMPANZEE (TROGLODYTES GORILLA, *Savage*, TROGL. SAVAGEI, *Owen*). BY PROFESSOR OWEN, F.R.S. ETC.

Since the communication of my description of the skulls of the great Chimpanzee of the Gaboon district, I have received from an esteemed correspondent, Dr. Wyman, Professor of Anatomy in Harvard University, United States, and a most accomplished anatomist and physiologist, a copy of his description of the parts of the skeleton of the great Chimpanzee which Dr. Savage had taken with him on

his return to America, together with a preliminary and highly interesting sketch of the natural history of the species by its discoverer, who proposes to call it *Troglodytes Gorilla*, adopting the term used by Hanno in describing the wild men which he discovered on the coast of Africa during his famous voyage*.

Dr. Wyman gives dimensions of the skulls of a male and female *Troglodytes Gorilla*, with comparative measurements of a characteristic skull of a negro, and those of the *Troglodytes niger* and *Simia satyrus* (Sumatran variety, or *S. Abelii*) from my Memoir in Trans. Zool. Soc. vol. i. p. 374; and he sums up the following points as showing that from the *Troglodytes niger* the *Trogl. Gorilla* "is readily distinguished—

- " 1. By its greater size ;
- " 2. By the size and form of the supraciliary ridges ;
- " 3. By the existence of the large occipital and interparietal crests in the males, and by rudiments of the same in the females ;
- " 4. By the great strength and arched form of the zygomatic arches ;
- " 5. By the form of the anterior and posterior nasal orifices ;
- " 6. By the structure of the infraorbital canal ;
- " 7. By the existence of an emargination on the posterior part of the hard palate ;
- " 8. The incisive alveoli do not project beyond the line of the rest of the face, as in the Chimpanzee and Orang ;
- " 9. The distance between the nasal orifice and the edge of the incisive alveoli is less than in the Chimpanzee ;
- " 10. The ossa nasi are more narrow and compressed superiorly."

The 5th, 7th and 9th are the characters which are most decisively repeated in the Bristol specimens of the skulls of *Trogl. Gorilla*, and are those that are least ascribable to age or the operation of external circumstances tending to produce a stronger variety of Chimpanzee. The value of the character from size is established by the concurrence of the foregoing more fixed ones. The supraciliary ridges are relatively as strongly developed and as prominent in the skull of a female adult *Trogl. niger* as in that of the *Trogl. Gorilla*, and they are as angular and rough or uneven in the skull of the adult male *Trogl. niger* as in that of the adult male *Trogl. Gorilla*. The male *Trogl. niger* shows also the median prominence between the orbits above the root of the nose.

In six skulls of *Troglodytes niger* Dr. Wyman found that "the temporal ridges are generally separated from each other by a space varying from half an inch to one or two inches, according to age, but in none of them is to be seen even a rudiment of the interparietal ridge." In an adult, but by the condition of the teeth, not old male *Trogl. niger*, the temporal ridges have met above the obliterated suture, and developed the rudiment of an 'interparietal ridge,' which would probably have risen above its rudimental state had the exercise of the large temporal muscles been longer continued.

* See the passage cited at p. 13, 'Falconer's Translation of the Voyage of Hanno,' London, 1797.

Processes, ridges and crests dependent upon the stimulus of muscular action for their development, are the seats of most variety, and the least safe or satisfactory osteological marks of specific distinction. In the great males of the *Tr. Gorilla* even a certain range of variety is presented by the skulls of the four adult males, which we are now able to compare.

In the one described by Dr. Wyman the interparietal or sagittal crest is elevated about $1\frac{1}{2}$ inch above the skull, and terminates above in a thin and free edge: in the fine male skull figured, and in the older male's skull, the two temporal ridges, though touching each other at their base, do not coalesce to form a single sagittal crest, but each terminates in a free edge, inclining from its fellow, and neither of them rise to half an inch at their highest part, three inches behind their point of contact.

4. The specific character of the zygomatic arches is best shown by the depth and convex or angular upper contour of the squamosal portion of the arch.

5. Dr. Wyman has well indicated the characteristic forms of the anterior and posterior nares; and the conformity of the four skulls, two males and two females, submitted to his able and scientific scrutiny, in this important character, with the three skulls which I have described, adds to our confidence in its constancy and value. The observed range of variety does not materially affect the well-marked difference of form in the posterior nares. Dr. Wyman finds in the *Tr. niger* that "the transverse diameter of the orifice exceeds that of the vertical, but in the *Tr. Gorilla* the vertical is twice that of the transverse; a condition which results from the elongation downwards of the superior maxillary bones." In one skull of an adult female *Trogl. niger*, in the Bristol Museum, the vertical diameter equals the transverse diameter of the posterior nares, and it exceeds it by about one-half only in the three skulls of the *Tr. Gorilla* in the same museum.

6. With regard to the sixth character, which was pointed out to Dr. Wyman by Prof. Agassiz, it is stated that "in the Chimpanzee the infraorbital canal forms a deep groove, terminating in the sphenomaxillary fissure, its depth remaining uniform to its termination; but in the Engé-ena (*Trogl. Gorilla*) the canal becomes gradually less deep from before backwards, and at the fissure is scarcely obvious." In the skull of the female *Trogl. Gorilla* (fig. 2) examined by me, the infraorbital canal is also shorter and shallower than in the skull of a female *Trogl. niger*, but the varieties observable in the condition of this canal in different individuals of the *Trogl. niger* are more marked than those above noticed in the skulls of the two species and induce me therefore to attach less importance to this character as a specific one. In two skulls of adult males, *e. g.* in the College of Surgeons, the infraorbital groove as it passes backwards again becomes a canal by the meeting, and in one specimen by the coalescence of the two sides of the groove above the canal for an extent of from two to three lines before it enters the sphenomaxillary fissure. Dr. Wyman indeed notices a similar conformation in an adult cranium of the Chimpanzee belonging to Dr. J. C. Warren. Now this is a

more decided difference from the continuous open groove at the floor of the orbit in the adult female *Tr. niger* than that groove presents in comparison with the shorter and shallower one in *Trogl. Gorilla*. I find too that the second character of *Trogl. Gorilla* pointed out by Prof. Agassiz,—“from the internal walls of the orbits which recede from each other in descending towards the floor, thus leaving a large pyramidal space for the lodgment of the os ethmoides,”—is so much less marked in the female skull of *Tr. Gorilla*, as contrasted with that of *Tr. niger*, as to induce me to view it more in the light of a sexual than a specific modification.

The seventh is a good character, and is repeated by each of the skulls of *Tr. Gorilla* examined by me. All the skulls of *Tr. niger* also show the backward projecting point, where the emargination exists in *Tr. Gorilla*.

8. The minor relative projection of the incisive alveoli beyond the line of the rest of the face is as characteristic of the three skulls of *Tr. Gorilla* now in England as of the four in the United States, and results from the same comparative shortness of the premaxillary bones, between the nasal orifice and the edge of the incisive alveoli. But the ossa nasi, besides being more narrow and compressed superiorly, are more prominent at that part in *Tr. Gorilla* than in *Tr. niger*, and they are also more expanded and broader inferiorly, and I cannot but regard the most decisive mark of the specific distinction of the *Troglodytes Gorilla* to be the longer persistence of the maxillo-premaxillary sutures, and the evidence thereby given of the peculiar form, development and connexions of the upper portions of the premaxillary bones. It is remarkable indeed, since these sutures remain so distinct in the adult female skull (fig. 2) and the younger adult male skull (fig. 1) here described, that no trace of them should have been detected in any of the four skulls taken by Dr. Savage to America, in which Dr. Wyman describes the *ossa nasi* as being “firmly co-ossified with each other and with the surrounding bones.”

The triangular expanded facial part of the upper end of each premaxillary intervening between the nasal and maxillary bones will always serve to distinguish the cranium of an immature *Trogl. Gorilla* from that of a *Trogl. niger*.

MISCELLANEOUS.

Note on the Development and Organization of Infusoria:—Gyratory Movements of the Vitellus: Pulsations of the Contractile Vesicle in the Egg. By M. F. POUCHET*.

I HAVE followed out the development of several animalcules: some emerge from the ovum with the form they are destined to present during the whole course of their existence (*Kerona*, *Vorticella*); others undergo, in the course of development, very apparent metamorphoses

* Communicated by J. T. Arlidge, A.B., M.B.